

CITY OF WILSONVILLE

2023 Annual Water Quality Report

Based on 2022 water testing data



WILSONVILLE
OREGON

About this Report and Data



Federal and State drinking water standards require monitoring and reporting of specific water-quality parameters. For each parameter, the U.S. Environmental Protection Agency (EPA) has established a maximum contaminant level (MCL) “below which there is no known or expected risk to health.” Furthermore, the EPA requires that only State-certified laboratories using approved standard methods are permitted to be used when analyzing water samples for public water systems. The 2022 data shows Wilsonville’s treated water-quality results at the Willamette River Water Treatment Plant as well as samples collected throughout the City’s water distribution system.

Wilsonville’s Water Source: Willamette River

In April 2002, the City began operating the Willamette River Water Treatment Plant (WRWTP) with a sub-surface intake on the Willamette River. The water-intake line is screened to protect fish and to prevent debris from entering the treatment plant. The Willamette Valley watershed upstream of the Wilsonville WRWTP intake encompasses an area of approximately 8,400 square miles. Treated surface water from the Willamette River is the City’s primary drinking-water source.

Wilsonville’s previous source of groundwater (eight local wells) is still available for use in emergencies. These wells tap a large underground formation called the Columbia River Basalt Aquifer.

Since the opening of the WRWTP, the City has not needed to use any of the wells for drinking water. All of Wilsonville’s water storage tanks and wells are covered and have security systems in place.

A source water assessment is available online at ci.wilsonville.or.us/publicworks/page/water-treatment-plant



Potential Source Water Contaminants

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The City of Wilsonville continuously meets or exceeds Federal and State requirements for safe drinking water. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. Water traveling over the surface of the land or through the ground, dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Potential Source water contaminants include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from agriculture, urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- The City's surface water supply is moderately susceptible to contamination from potential contaminant sources (e.g. underground storage tanks). However, the risk to surface water quality is relatively small.



2022 Water Quality Data

Contaminants	Date Tested	Range		Avg.	MCL/MRDL	MCLG/MRDLG	Potential Sources	Violation
		Low	High					
INORGANIC CONTAMINANTS								
Barium (ppm)	Quarterly	0.0056	0.0057	N/A	2	2	Discharges from drilling wastes and metal refineries; erosion of natural deposits	No
Nitrate (ppm)	Quarterly	0.63	.70	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	No
Chromium (ppm)	Quarterly	ND	.0032	N/A	.1	.1	Found naturally in rocks, plants, soil and volcanic dust, and animals. can also be produced by industrial processes. There are demonstrated instances of chromium being released to the environment by leakage, poor storage, or inadequate industrial waste disposal practices.	No
RESULTS OF LEAD AND COPPER TESTING SUMMER 2021¹								
Lead (ppm)	8/18/21 – 8/24-21	90th percentile: ND		N/A	AL = 0.015	0	Corrosion of household plumbing systems; erosion of natural deposits	No
Copper (ppm)	8/18/21 – 8/24-21	90th percentile: 0.078		N/A	AL = 1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits	No
DISINFECTION BYPRODUCTS, BYPRODUCT PRECURSORS, AND DISINFECTANT RESIDUALS								
Total Trihalomethanes (TTHMs) (ppb)	Quarterly	6	20.3	9.4	80	0	Byproduct of drinking water disinfection	No
Haloacetic Acids (HAA5) (ppb)	Quarterly	2.9	6.8	4.4	60	N/A	Byproduct of drinking water disinfection	No
Bromate (ppb)	Monthly	1.1	2.8	2.0	10	0	Byproduct of drinking water disinfection	No
Total Organic Carbon ² (ppm)	Quarterly	0.57	2.40	1.186	TT	N/A	Naturally present in the environment	No
Chlorine (ppm)	Monthly	0.22	0.98	N/A	4.0	4.0	Water additive used to control microbes	No
MICROBIOLOGICAL CONTAMINANTS								
Fecal Coliform/E.Coli (positive samples)	Monthly	ND			0	0	Human and animal waste	No
Turbidity (NTU)	Daily	0.01	0.08	N/A	TT ³	N/A	Sediment/soil runoff	No

Footnote explanations:

¹ Lead and copper are sampled every three years during the summer. There were no results for copper or lead that exceeded the action limits (AL) in 2021. New sampling is scheduled in 2024.

² Total organic carbon (TOC) has no health effects, however, TOC provides a medium for the formation of disinfection byproducts (DBPs).

³ TT is equal to or less than 0.3 NTU in 95% of samples each month.



According to the EPA

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Contaminants do not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline 1-800-426-4791.

Immuno-compromised people (such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some senior citizens, and infants) may be more vulnerable to contaminants in drinking water than the general population. These people should seek advice about drinking water from their health care providers.

Federal guidelines from the EPA and the Center for Disease Control regarding the appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.



Water Treatment: a Step-by-Step Guide

Step 1 – Intake: River water flows through the intake screens and then it is pumped uphill to the plant for treatment.

Step 2 – Enhanced Coagulation,

Sedimentation: Raw water is treated with a coagulant and enters the Actiflo™ process, which quickly removes turbidity and other contaminants.

Step 3 – Ozonation: Clarified water from Actiflo™ is disinfected with ozone, an extremely powerful oxidizer which kills pathogenic organisms and breaks down taste and odor compounds.

Step 4 – GAC Filtration: Disinfected water passes through Granular Activated Carbon (GAC) filters which effectively remove turbidity and dissolved organic molecules.

Step 5 – Secondary Disinfection & Storage: Filtered water is treated with chlorine which protects the water as it travels through the distribution system to City reservoirs.



Glossary of Terms

- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. MCLs are set at very stringent levels.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirement which a water system must follow. For lead and copper, a water supply is in compliance with the drinking water standards if 90% of the samples are less than or equal to the “action level.”
- **Nephelometric Turbidity Units (NTU):** A measure of light-scattering particulate in the water, or how clear the water is.
- **ND:** Not detected.
- **ppm:** parts per million or milligrams per liter (mg/L).
- **ppb:** parts per billion or micrograms per liter (µg/L).
- **pCi/L:** picocuries per liter (a measure of radioactivity).
- **mrem/year:** millirems per year (a measure of the radiation absorbed by the body).

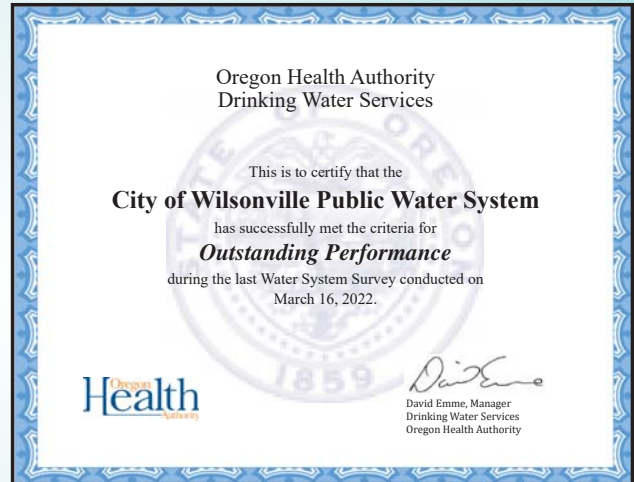
Wilsonville Continues to Exceed Federal and State Water Quality Standards

Since the Willamette River Water Treatment Plant opened, Wilsonville water has exceeded all Federal and State drinking water standards for water quality and regulatory compliance. In March 2022, Oregon Health Authority's water system survey identified Wilsonville as an Outstanding Performer.

The City's excellent drinking water quality is the result of a high-quality source coupled with a state-of-the-art treatment plant and a well-maintained water storage and distribution system.

From the Willamette River, water enters the plant to begin a five-step treatment process. The treatment plant's multi-barrier approach utilizes the best available technology, including intermediate oxidation with ozone and 13 other sub-processes.

The City contracts with Veolia to provide day-to-day operations and maintenance of the treatment facility. "Our partnership with Veolia and the technology used at our water plant make Wilsonville's drinking water among the best in the state," Public Works Director Delora Kerber said.



Lead in Your Drinking Water

Wilsonville is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components.

Lead in drinking water occurs primarily from materials and components associated with service lines and home plumbing in older homes.

In 2021, Wilsonville tested 32 pre-approved sample sites and found none above the action limit. This shows that Wilsonville's water is being properly treated for corrosion control in the distribution system. Testing takes place again in 2024.

Corrosion control practices are maintained by public water systems to protect consumers from potential lead and copper contamination within private plumbing systems.

When water has been sitting for several hours you can minimize the potential for lead exposure by flushing the tap for 30 seconds to 2 minutes before using water for drinking or cooking.

Elevated levels of lead can cause serious health problems, especially for pregnant women or young children. If you are concerned about lead in your water, you may wish to have the water tested. Information on lead in drinking water, testing methods, and steps to take to minimize exposure is available from the Safe Drinking Water Hotline 1-800-426-4791 or epa.gov/safewater/lead.



Regional Water Providers Consortium

The City of Wilsonville is a member of the Regional Water Providers Consortium, which provides leadership in the planning, management, stewardship, and resiliency of drinking water in the Portland metropolitan region.



The City of Wilsonville is one of 25 members of the consortium, which serves Clackamas, Multnomah, Washington and Yamhill Counties. Together, participating entities provide most of the Portland metropolitan area’s drinking water.

Formed in 1997, the Consortium serves as a collaborative and coordinating organization to improve the planning and management of the municipal water supply. By working collaboratively, the Consortium and its members achieve economies of scale implementing regional programs that save customers money.

The Consortium’s work is divided into three categories: conservation, emergency preparedness and regional coordination.

Find out more about the Consortium and its work in water conservation, emergency preparedness, and regional coordination at regionalh2o.org.

For More Information

If you have questions about this report or would like a hard copy mailed to you, call 503-682-4092.

City Council meetings occur on the first and third Monday of each month, 7 pm at City Hall; public comments are welcome.

This report provides water-quality data to the public in compliance with the Federal Clean Water Act and OAR 333-061-0043 Consumer Confidence Reports. The reporting period includes all testing performed during the 2022 calendar year.



- City of Wilsonville Public Works 503-682-4092
- EPA’s Safe Drinking Water Hotline 1-800-426-4791
- State Drinking Water Program bit.ly/3oQVWY9
- City of Wilsonville ci.wilsonville.or.us/WaterQuality
- EPA Water Website epa.gov/safewater/